operation based on the result of said comparison [thus determined state of said image data];

an operation panel, responsive to said selection prohibiting controller, for selecting any of said plurality of modes of operation, said operation panel automatically prohibiting selecting said thus determined inoperable mode of operation.

REMARKS

The present amendment after final is a SECOND amendment submitted in response to the Examiner's Office action dated August 3, 1999. The first amendment after final was submitted on October 20, 1999 and resulted in an Advisory Action which indicated that the amendment was not entered by the Examiner.

The indication by the Examiner that claims 14-16 and 24-26 would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims, is acknowledged with appreciation.

As noted in the prior amendment, in order to minimize additional fees that would be due based on an added number of independent claims (in the case where the objected claims were rewritten in independent form) claims 14-16 and 24-26 have not been rewritten in independent form at this time because the rejection of claims 13 and 23 (from which they depend) have been traversed by the present response.

The indication by the Examiner that the drawing change submitted on April 26, 1999 is approved is also noted with appreciation.

a. **Election / Restriction**

The present office action requires a restriction to one of the following inventions:

I. Claims 1-3, 7-12, and 17-22, drawn to a display control unit; and

II. Claims 4-6, 13-16 and 23-30, drawn to a print prevention control unit.

Pursuant to the restriction requirement, and consistent with election made in the previous restriction requirement, Applicant elects the invention of class II--Claims 4-6, 13-16 and 23-30--drawn to a print prevention control unit.

b. **Application Summary**

Claims 1-26 are pending in the present Application. The status of the claims is as follows:

Claims 1-3, 7-12, and 17-22 are presently withdrawn from consideration as being directed to a non-elected invention under the present restriction requirement while claims 4-6, 13-16 and 23-30 ARE presently under consideration as being directed to the

elected invention;

Claims 14-16 and 24-26 presently stand as objected to as being dependent upon a rejected base claim but are indicated as being allowable if rewritten in independent form;

Claims 4-6 and 13 presently stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ueda et al, U.S. Patent 5,715,497;

Claims 4, 13 and 27-30 presently stand rejected under 35 U.S.C. § 103(a) as being obvious over Nishimori, U.S. Patent 5,041,874, in view of Telle, U.S. Patent 5,555,099; and

Claim 23 presently stands rejected under 35 U.S.C. § 103(a) as being obvious over Collard et al, U.S. Patent 5,825,988, in view of Ueda et al, U.S. Patent 5,715,497.

By this Amendment, claims 1-3, 7-12 and 17-22 are canceled without prejudice as being directed to a non-elected invention. Also, claims 4, 13, 14, 16, 23, 26 and 28 have been amended to improve the form thereof.

c. **Section 102 Rejection(s)**

The rejection of claims 4-6 and 13 under 35 U.S.C. § 102(e) as having been anticipated by Ueda et al, U.S. Patent 5,715,497, is respectfully traversed based on the following.

i. Claim 4:

Claim 4 is independent and claims 5 and 6 depend therefrom. The rejection of claim 4 will be addressed first.

Claim 4 as presently presented states:

> An image processing device operable in a plurality of modes of operation, comprising:
> **a memory for storing image data of a plurality of frames;**
> a state decision controller for determining a state of said image data stored in said memory for each frame;
> an operation panel for selecting any of said plurality of modes of operation; and
> a **selection prohibiting controller for comparing the state of at least two frames,** as determined by the state decision controller, and for automatically **prohibiting selecting** an inoperable mode of operation of said plurality of modes of operation through said operation panel **based on the result of said comparison.**

[emphasis added]

Thus, claim 4 requires, among other things, that a memory be provided for storing image data of a plurality of frames. Claim 4 also requires that the selection prohibiting controller compare the determined state of at least two frames and be capable of prohibiting a mode based on the result of that comparison.

Storage of a plurality of frames is described in the present specification wherein it is noted that for

certain copy modes, "it is preferable that each original, more specifically, the frame of each read image data, has the same size." Thus, in some embodiments of the present invention, in order to determine whether a specific mode is possible, it is necessary to store frame information for more than one frame so that the size of each frame can be compared to each other.

Ueda et al, while disclosing a input page memory 103a, does not disclose a memory for storing image data of a plurality of frames. Instead, Ueda et al disclose a memory which stores the image signal from scanning a single document which is output in line units. (Column 15, lines 37-39).

Additionally, while Ueda et al discloses release of normal mode when it is determined that a document is vertically oriented (column 13, lines 16-23), Ueda et al is completely silent as to the feature of claim 4 of determining the state of two frames of image data, comparing the determined states and prohibiting a mode based on the result of the comparison.

Absent a disclosure of a system including a memory for storing image data comprising a plurality of frames, and also absent a disclosure of a system which determines the state of two frames of image data, compares the determined states and prohibits a mode based on the result of the comparison, applicants respectfully submit that Ueda et al cannot anticipate

the invention of claim 4.

Claims 5 and 6 depend from claim 4. As claim 4 is considered to be novel over the cited reference for the above described reasons, claims 5 and 6 which depend therefrom are also considered to be novel for at least the reason of depending from claim 4.

ii. Claim 13:

Claim 13, like claim 4, includes the limitations that: (1) the memory is for storing image data of a plurality of frames; and (2) the state decision controller determines the state of two frames of image data, compares the determined states and prohibits a mode based on the result of the comparison. Accordingly, because Ueda et al do not disclose these features as outlined above with respect to claim 4, applicants respectfully submit that Ueda et al cannot anticipate the invention of claim 13.

Accordingly, it is respectfully requested that the rejection of claims 4-6 and 13 under 35 U.S.C. § 102(e) as having been anticipated by Ueda et al, U.S. Patent 5,715,497, be reconsidered and withdrawn.

d. Section 103 Rejection(s)

i. Claims 4, 13, and 27-30

The rejection of claims 4, 13, and 27-30 under 35

U.S.C. § 103(a) as having been obvious, to one of ordinary skill in the art at the time of the invention, from Nishimori, U.S. Patent 5,041,874, in view of Telle, U.S. Patent 5,555,099, is respectfully traversed for the reasons set forth below.

As noted in the present specification, the present invention is intended to provide a user-friendly image processing device wherein when a mode of operation is not operable, based on the characteristics of the images to be processed, the user will not select a non-operable mode.

The acknowledgment in the rejection that Nishimori et al does not disclose "a memory for storing image data of a plurality of frames, and consequently, determining the state of the image data stored in the memory for each frame," is acknowledged with appreciation.

As noted above, claim 4 as presently presented states:

> An image processing device operable in a plurality of modes of operation, comprising:
> **a memory for storing image data of a plurality of frames;**
> a state decision controller for determining a state of said image data stored in said memory for each frame;
> an operation panel for selecting any of said plurality of modes of operation; and
> a **selection prohibiting controller for comparing the state of at least two frames,** as determined by the state decision

controller, and for automatically prohibiting **selecting** an inoperable mode of operation of said plurality of modes of operation through said operation panel **based on the result of said comparison.**
[emphasis added]

As shown above, claim 4 requires a memory for storing image data of a plurality of frames. Claim 4 also includes a state decision controller. Each frame of the image data is processed by the state decision controller so as to determine "a state of the image data" for that frame. Also, claim 4 includes a selection prohibiting controller wherein, after the state decision controller determines the state for each frame within the image data, the selection prohibiting controller operates to prohibit an inoperable mode of operation based on the result of a comparison between the determined states of two of the frames.

In contrast to the present invention, Nishimori does not disclose: (1) a memory for storing image data of a plurality of frames; and (2) a state decision controller which determines the state of two frames of image data, compares the determined states and prohibits a mode based on the result of the comparison. Accordingly, Nishimori, by itself, cannot render obvious the invention of claim 4.

An additional distinction between the present invention and Nishimori et al is that the present invention determines a state of the image data stored

in the memory for each frame. Nishimori et al, in comparison, makes a direct determination of a size of the document based on sensors and timers which detect the presence of the document and/or the time to transport the document. Such direct detection of the size of the document as employed by Nishimori et al is distinct from the process of detecting a state of stored image data as used by the present invention.

Yet another distinction between the present invention and Nishimori et al is that the present invention prohibits an inoperable mode of operation based on the determined state of the image data which is stored in the memory and which comprises a plurality of frames. Thus, the present invention determines a state for each frame of the plurality of frames.

Nishimori et al, in contrast, does not make a determination for each frame for a plurality of frames. Instead, Nishimori et al prohibits a particular finishing mode (as an example) based on a size of paper that is selected (which is set based on a size of the document to be reproduced). The determination in Nishimori et al is not based on a detecting a state for each frame of a plurality of frames. Instead, Nishimori et al make only one determination of document size and, based on that one determination, permits or prohibits a mode.

As will be shown below, Telle is unable to overcome the deficiency of Nishimori et al to render

obvious the invention of claim 4.

Specifically, Telle does not disclose or suggest prohibiting selection of a mode based on a state of the image data stored in memory; Telle does not make a state determination for each frame of a plurality of frames; and Telle does not disclose or suggest prohibiting selection of a mode based on a comparison between states of two frames of image data stored in memory.

Telle discloses a reproduction apparatus which includes a multi-page buffer memory 120. According to Telle, "One function of the multiple-page job image buffer memory 120 is to store al the pages of a particular job as rasterized image data so that plural sets of collated pages may be produced without re-scanning . . ." (Column 7, lines 3-7). Telle also discloses that once multiple pages have been scanned, if certain job level changes such as color, copy quality, reduction/enlargement, etc., are changed, then the pages must be rescanned. (Column 8, lines 45-60).

Thus, Telle, in contrast to the present invention, discloses that when the operator of the duplicating apparatus attempts to modify certain job level mode settings after the documents have already been scanned, these changes are prohibited unless the job is rescanned. This mode change prohibition is completely different than that of the present invention.

In the present invention, the prohibition is based on the determined "state of the image data." That is, the attributes of the image data control whether a mode may or may not be selected. Telle, in contrast, simply says that prior to scanning the documents a certain set of modes may be selected, and once the documents have been scanned (without regard to any attributes of the image data discerned during scanning) some modes may no longer be changed without necessitating rescanning.

Accordingly, Telle does not disclose or suggest prohibiting selection of a mode based on a state of the image data stored in memory; Telle does not make a state determination for each frame of a plurality of frames; and Telle does not disclose or suggest prohibiting selection of a mode based on a comparison between states of two frames of image data stored in memory.

Thus, as Telle does not disclose or suggest the above-described features of claim 4, applicants respectfully submit that Telle is unable to overcome the deficiency of Nishimori et al to render obvious the invention of claim 4.

The discussion will now turn to the rejection of claim 13.

Claim 13, as presently presented, recites:

> An image forming apparatus operable in a plurality of print modes, comprising:

> a memory for storing image data of a **plurality of frames;**
> a printer for reading said image data stored in said memory for each frame and for printing;
> **a state decision controller for determining a state of said image data stored in said memory;**
> an operation panel for selecting any of said plurality of print modes; and
> selection prohibiting controller **for comparing the state of at least two frames,** as determined by the state decision controller, and for automatically **prohibiting selecting** an inoperable print mode of said plurality of print modes through said operation panel **based on the result of said comparison.**

[Emphasis added]

Thus, claim 13, like claim 4, includes the limitations of: (1) a memory for storing image data of a plurality of frames; and (2) a state decision controller that determines the state of two frames of image data, compares the determined states and prohibits a mode based on the result of the comparison.

As discussed above with respect to claim 4, neither Nishimori et al nor Telle disclose, suggest or teach prohibiting selection of a mode based on a state of the image data determined from image data stored in memory, making a state determination of image data which includes a plurality of frames, or making a state determination of image data based on a comparison between the state two frames of the image data. Accordingly, applicants respectfully submit that Nishimori et al and Telle, either singularly or in

combination, are able to render obvious the invention of claim 13.

The discussion will now turn to the rejection of claim 27.

Claim 27 depends from claim 4.

As discussed above, claim 4 is considered to be nonobvious over the cited references. Accordingly, claim 27 which depends therefrom is also considered to be nonobvious for at least the reason of depending from a nonobvious claim.

The discussion will now turn to the rejection of claims 28-30. Claim 28 is independent and claims 29-30 depend therefrom.

Claim 28, as presently presented, recites:

> An image processing device operable in a plurality of modes of operation, comprising:
> **a memory for storing image data of a plurality of frames;**
> **a state decision controller for determining a state** of said image data for each frame stored in said memory;
> a selection prohibiting controller, responsive to said state decision controller, for comparing the state of at least two frames, as determined by the state decision controller, and **for determining an inoperable mode of operation** of said plurality of modes of **operation based on the result of said comparison;**
> an operation panel, responsive to said selection prohibiting controller, for

selecting any of said plurality of modes of operation, said operation panel automatically **prohibiting selecting said thus determined inoperable mode of operation.**

[Emphasis added]

Thus, claim 28, like claim 4, includes limitations of a memory for storing image data of a plurality of frames; a controller for making a state determination for each frame of a plurality of frames, and a selection prohibiting controller for determining an inoperable mode of operation based on the result of the comparison.

As discussed above with regard to claim 4, neither Nishimori et al nor Telle disclose, suggest or teach making a state determination for each frame of a plurality of frames, or prohibiting selection of a mode based on a state of the image data stored in memory, much less prohibiting selection of a mode based on a comparison between states of two frames of image data stored in memory. Accordingly, applicants respectfully submit that Nishimori et al and Telle, either singularly or in combination, are able to render obvious the invention of claim 28.

Claims 29 and 30 depend from claim 28. As claim 28 is considered to be nonobvious over the cited references for the above described reasons, claims 29 and 30 which depend therefrom are also considered to be nonobvious for at least the reason of depending from claim 28.

Accordingly, as Nishimori et al and Telle fail to disclose or suggest the above-mentioned limitations of the claimed invention, it is respectfully requested that the rejection of claims 4, 13, and 27-30 under 35 U.S.C. § 103, as having been obvious, to one of ordinary skill in the art at the time of the invention, from Nishimori, U.S. Patent 5,041,874, in view of Telle, U.S. Patent 5,555,099, be reconsidered and withdrawn.

ii. Claim 23

The rejection of claim 23 under 35 U.S.C. § 103(a) as having been obvious, to one of ordinary skill in the art at the time of the invention, from Collard et al, U.S. Patent 5,825,998 in view of Ueda et al, U.S. Patent 5,715,497, is respectfully traversed for the reasons set forth below.

Claim 23, as presently presented, recites:

> An image forming apparatus operable in a plurality of print modes, comprising:
> a memory for storing a plurality of print jobs, each print job containing image data of at least two frames;
> a print-job selector for selecting one of said plurality of print jobs stored in said memory;
> a state decision controller for determining a state of said image data contained in said print job selected by said print-job selector;
> a printer for printing said image data contained in said print job selected by said print-job selector;

an operation panel for selecting any of said plurality of print modes; and

a selection prohibiting controller for comparing the state of at least two frames, as determined by the state decision controller, and for automatically prohibiting selecting an inoperable print mode of said plurality of print modes through said operation panel based on the result of said comparison.

[Emphasis added]

Thus, claim 23, as amended, includes limitations of a memory for storing a plurality of print jobs where each print job contains image data of at least two frames; a controller for determining a state of image data contained a print job which is selected; and a selection prohibiting controller for automatically prohibiting selecting an inoperable print mode based on the result of a comparison between the states of at least two frames of image data in the selected print job.

The acknowledgment in the rejection that Collard et al does not disclose a "controller automatically prohibiting selecting an inoperable print mode based on the thus determined state of the selected print job" is acknowledged with appreciation.

Collard et al also fails to disclose, suggest or teach determining a state of two frames of image data, comparing the states automatically prohibiting selecting an inoperable print mode based on the result of the comparison.

As Collard et al does not disclose either a controller for automatically prohibiting selecting a mode or making a comparison between two frames of image data and prohibiting selecting an inoperable print mode based on the result of said comparison, Collard et al cannot, by itself, render obvious the invention of claim 23.

Ueda et al, discloses an image forming device which detects, for instance, a size of a document during the scanning process. While Ueda et al detects a document size during scanning, as discussed above in the Section 102 rejection of claim 1, Ueda et al is completely silent as to the feature of claim 23 of determining the state of two frames of image data, comparing the determined states and prohibiting a mode based on the result of the comparison.

An additional distinction between the device of Ueda et al and the present invention is that in Ueda et al the document size is directly detected during scanning, in contrast to the presently claimed invention which determines a state of the frame from the image data which is stored in memory. Accordingly, the principle of operation of Ueda et al is completely different than the presently claimed invention.

Accordingly, it is respectfully requested that the rejection of claim 23 under 35 U.S.C. § 103, as having been obvious, to one of ordinary skill in the art at

the time of the invention, from Collard et al, U.S. Patent 5,825,998 in view of Ueda et al, U.S. Patent 5,715,497, be reconsidered and withdrawn.

In view of the foregoing Amendments and remarks, this Application is considered to be in condition for allowance and reconsideration and a notice of allowance is respectfully requested.

This Amendment does not result in any change to the total number of claims or to the number of independent claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is incurred by this Amendment.

If an extension of time is required to enable this document to be timely filed and there is no separate Request for Extension of Time filed herewith, this document is to be construed as also constituting a Request for Extension of Time under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed. Any fee required for such Request for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than issue fee, and not submitted herewith should be charged to deposit account

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Respectfully submitted,

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